Date: Tue, 31 May 94 10:58:39 PDT
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>
Errors-To: Info-Hams-Errors@UCSD.Edu
Reply-To: Info-Hams@UCSD.Edu
Precedence: Bulk
Subject: Info-Hams Digest V94 #598
To: Info-Hams

Info-Hams Digest Tue, 31 May 94 Volume 94 : Issue 598

Today's Topics:

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 31 May 94 16:05:38 GMT
From: news-mail-gateway@ucsd.edu
Subject: (none)
To: info-hams@ucsd.edu

help

Date: 31 May 1994 11:32:30 -0400
From: cosmos.nectech.com!cosmos.nectech.com!root@uunet.uu.net
Subject: Air Show, June 5, North of Boston
To: info-hams@ucsd.edu

If you enjoy aircraft of any type, or even wonder what this is all about,

don't miss this event! This is a *lot* of fun for everyone. Last year's event was a huge success. Many enjoyed it as much as any full scale airshow. Typically there are more than sixty aircraft in attendance. This year we have some new events designed to please the audience even more than last year. We are not talking about flying toy's here. Last year we had some aircraft with eight foot (yes, 8 feet) wingspans. Yes they were flying, and saying that they were aerobatic would be putting it mildly!

*****

THE NH FLYING TIGERS R/C CLUB SIXTH ANNUAL RADIO CONTROLLED MODEL AIRSHOW

Located in Derry/Londonderry New Hampshire

Featuring flying and static displays of radio controlled models.

Sunday, June 5th

Flying begins at 10:00 am

Spectators are welcome

Food and refreshments available

One new ready to fly R/C
airplane will be raffled off!

(bad weather date is Sunday, June 12th)

100% of the fifty cent gate admission
goes to the local United Way

Directions: From the North or South take I-93 to exit 5 in New Hampshire. Head southeast (turn right if coming from the South, left if coming from the North) on Rout 28 for 2.7 miles until you pass Walmart. Take the next street on your right ("A" street) and follow the signs to the event.

For more information call Ken at (603) 432-7345 (evenings and weekends)

--
Rich Bono, Principal Software Engineer, NEC Technologies, Inc.
(508) 635-6300 internet: rbono@nectech.com

Date: Tue, 31 May 1994 17:26:30 GMT
From: ihnp4.ucsd.edu!sdd.hp.com!sgiblab!brunix!maxcy2.maxcy.brown.edu!
md@network.ucsd.edu
Subject: Ham Radio few problem
To: info-hams@ucsd.edu

roger@btree.brooktree.com (Roger Bly) writes:

> By jamming, I mean the unauthorized use of a closed repeater, not
> malicious interference. Maybe I need to think of a better word
> for it, but when a bunch of us attack a closed repeater with rapid-fire
> conversation, we call it jamming. We operate legally within Part 97
> and the Communications Act of 1934.

Since the FCC has stated that a repeater trustee has the right to
define who may and who may not use his/her repeater, if you operate
on a closed repeater without the permission of the owner you are
in fact violating Part 97.

You're a good example of why we should have caneing in the US.

MD
--
-- Michael P. Deignan
-- Amalgamated Baby Seal Poachers Union, Local 101
-- "Get 'The Club'... Endorsed by Baby Seal poachers everywhere..."

Date: Tue, 31 May 1994 15:45:56 GMT
From: psinntp!moose!moose.gdss.grumman.com!yarbrda@uunet.uu.net
Subject: IDing
To: info-hams@ucsd.edu

>>>>> "Jeff" == Jeff Johnson <johnsoj@autsb.allied.com> writes:
In article <199405262047.PAA03403@news.cs.utexas.edu> johnsoj@autsb.allied.com
(Jeff Johnson) writes:

> In article <2s2vas$940@illuminati.io.com>,
> hoagy@illuminati.io.com (Sir Hoagy), alias Matt Rupert wrote:

> [stuff deleted]
>> I'm newly licensed 3 weeks now, but I've been listening on my scanner
>> for 6 months. The way _I_ was taught versus how some of the
>> hams do it is 180 opposite.

>> I was taught to say "This is KB8SGL monitoring(or listening)" when
>> I am just pokin' on a channel, waitin' for a QSO. I hear this:
>> "This is AB1CDE listening on 146.88"

>> Why the $#@! do you need to tell me the frequency I'm listening to?
> [more stuff deleted]

> I see it as a courtesy.

> It is a matter of safety for the driving individuals than anything
> else because it allows the drivers desiring to listen or respond
> to know which frequency you are using and quickly take thier radio out
> of scan mode and set it on your frequency --- all without taking their
> eyes off the road for very long.

I agree completely, Jeff. The other reason I often do it is that most
folks I know and talk with often have dual band (2m and 440) rigs, and
it's nice to know where that voice you just heard came from. There's
nothing more embarrassing than hearing someone on the radio you want
to chat with, grabbing the microphone and calling them, only to find
you left your rig on the *other* band. :-)

I also chat with my wife on the way home from work, and we have
"designated" frequencies....usually a 440 repeater frequency and a 2m
simplex frequency that we use when I close enough to home. Announcing
the band in some fashion is nearly mandatory, unless she happens to be
staring at the raio when I call.

Regards all,

Danny
--

==
Danny Yarbrough, KE4DXA   Northrop-Grumman Data Systems
Email: yarbrda@gdss.grumman.com   Herndon, VA
Packet: ke4dxa@n4lxi.#nova.va.us.noam   703-713-4136

Date: Tue, 31 May 1994 12:35:02 GMT
From: ihnp4.ucsd.edu!usc!math.ohio-state.edu!news.acns.nwu.edu!news.eecs.nwu.edu!
tellab5!jwa@network.ucsd.edu
Subject: Radio Shack DSP
To: info-hams@ucsd.edu

In article <31761@uswnvg.uswnvg.com> cjackso@uswnvg.com (Clay Jackson) writes:
>Has anyone had any experiences with the new RS DSP unit? For $79.95,
>it seems pretty reasonable, if it works.

>
>Thanks in advance!
>
>
I have one and the auto notch and bp filters do a nice job. But it's
just another audio filter. I think the radio's I.F. filters are more
affective. The R.S. noise reduction feature doesn't even work!

Most filter boxes (ie Timewave, JPS, MFJ) uses the LMS adaptive filter
to reduce backgroud noise. I was un-impressed with the RS DSP noise
reduction performance.

I use it for a mobile speaker for my scanner or 2 meter handheld.

   Jack Albert WA9FVP   Fellow Radio Hacker
   (815) 723-1874

Date: 31 May 1994 12:16:59 -0400
From: ihnp4.ucsd.edu!usc!howland.reston.ans.net!wupost!gumby!
newsxfer.itd.umich.edu!zip.eecs.umich.edu!panix!not-for-mail@network.ucsd.edu
Subject: Routing 12v power into 94 Dodge Caravan
To: info-hams@ucsd.edu

In article <Cqo8Fs.LBH@ceco.ceco.com>,
Charles R. Sufana <sufana@ceco.ceco.com> wrote:
>
>As anyone figured out a good location to bring 12 volt power into the cabin
> area of a 94 Dodge Caravan.
[...]
>this new Caravan is really packed.

For 12V power in my '91 Voyager (same as a '91 Caravan) I went to a
reputable car stereo shop and had them do the 12V power runs for me.

Since these folks do so many installations I figured they'd know the best
way to route the cables. I'm quite pleased with their work, and will
likely do the same with future cars (unless there are obvious places to
go through the firewall).

An added bonus of this is that my dealer said that work done by reputible
car stereo shops does not void the car's warranty, but work by the car
owner sometimes can. I figured better safe than sorry!

They installed fuses right at the battery on both the hot and ground

leads (as per my request), and gave me two "drops" in the interior -- one behind the dash "console" and one on the drivers side at the place where the rear seat can be mounted.

They did a clean, neat job, and charged about $40. All things considered, I think it was well worth it.

73, Andy
--

        _____ Andrew Funk, KB7UV _____
       | ENG Editor/Microwave Control, WCBS-TV Channel 2 News, New York |
       | Internet: kb7uv@panix.com   Packet: kb7uv@kb7uv.#nli.ny.usa |
       | --- INSERT COMMERCIAL HERE --- |

Date: Tue, 31 May 1994 15:40:25 GMT
From: ihnp4.ucsd.edu!sdd.hp.com!col.hp.com!news.dtc.hp.com!hplextra!hplb!hpwin055.uksr!hpqmoea!dstock@network.ucsd.edu
Subject: SSB Filters
To: info-hams@ucsd.edu

Elendir (elendir@enst.fr) wrote:

: I know little about helicoidal filters, so I d be pretty interested in knowing
: more.

  Connaisez-vous "Handbook of filter synthesis" par Anatol I Zverev, John Wiley and sons inc New York 1967 ISBN 0 471 98680 1   ? chapitre 9 "Helical filters" . c'est le tome definitif pour le dessein mathematique des filtres.

 Also, I d like to know what frequency swing you can expect from a Xtal
: oscillator modulated by a varicap diode.

  (sorry, my French isn't adequate for this part..)

   It depends a lot on the frequency, the circuit, and production tolerences. With care a 200 ppm (parts per million) tuning range can be reasonably reliably achieved for a favourable frequency and circuit.

  beware that overtone crystals are far far harder to pull. In general terms, if you have two crystals at the same frequency, the overtone one will give a swing reduced by a factor roughly equal to the square of its overtone number.

   Example:

A 25 MHz fundamental crystal in an oscillator circuit with a swing of 100 ppm. replace the crystal with one with its third overtone at 25 MHz, and you'll get about 100/(3^2) = 11 ppm swing ! (very roughly!)

If the tuning range is important, use a funamental crystal at a suitable frequency, and use frequency multipliers.

Beware of attempts to pull an oscillator too far, you'll suffer from temperature dependant failure to start, etc etc.

Bon chance

David GM4ZNX

Date: 31 May 94 17:23:00 GMT
From: sdd.hp.com!elroy.jpl.nasa.gov!not-for-mail@hplabs.hpl.hp.com
Subject: Yaesu FT-530 Microphone Prob
To: info-hams@ucsd.edu

In article <Cqo327.H8r@csn.org>, Jim Deeming <jwdxt@csn.org> wrote:
>
>I have a 3 week old FT-530 with the display mike accessory. I am very
>impressed with the radio but the mike is giving me problems. If I use the
>mike, my signal strength is about the same but everyone says it sounds
>like I wrapped the mike in a towel - low audio strength.
>

Hi, Jim:
I and several friends of mine have been using this same configuration for about a year now...We experience just the opposite: the lcd mike actually *enhances* the audio quality. Hmmm, sounds like the folks at Yaesu may have changed the recipe on the mike. Sorry I couldn't be of any help, but I ma intrigued by your problem. Good luck and I hope you get it fixed!

Regards,
Neil (kn6vj)

Neil D. Pignatano
ndp@misr-fsw.jpl.nasa.gov

"Plastic People, oh, baby, you're such a drag!"
-Frank Zappa

Date: 31 May 1994 16:07:39 GMT
From: cyberpunk.ucsd.edu!brian@network.ucsd.edu
To: info-hams@ucsd.edu

References <1994May28.151635.9606@cs.brown.edu>,
<ddtodd.124.000ABCF1@ucdavis.edu>, <CqL11u.F40@news.Hawaii.Edu>
Subject : Re: Ham Radio few problem

roger@btree.brooktree.com (Roger Bly) writes:
> Good! Several of us in San Diego are also writing letters, petitioning,
> jamming, etc. to shut down closed repeaters in the amateur service.

Mr. Bly is well known in the San Diego Amateur Radio scene. In my
opinion, he does not represent a majority of the area's amateurs.
     - Brian

Date: 31 May 1994 09:26:36 -0700
From: btree.brooktree.com!usenet@network.ucsd.edu
To: info-hams@ucsd.edu

References <1994May28.151635.9606@cs.brown.edu>,
<ddtodd.124.000ABCF1@ucdavis.edu>, <CqLAIs.HwF@news.hawaii.edu>
Subject : Re: Ham Radio few problem

In article <CqLAIs.HwF@news.hawaii.edu>,
Jeffrey Herman <jherman@uhunix3.uhcc.Hawaii.Edu> wrote:
>roger@btree.brooktree.com (Roger Bly) writes:
>>
>> Good! Several of us in San Diego are also writing letters, petitioning,
>> jamming, etc. to shut down closed repeaters in the amateur service.
> ^^^^^^^
>
>In December someone on here chastised me for calling him a criminal and
>saying `once a criminal always a criminal'; now he's jamming closed repeaters.
>Back to HF CW where everyone's licensed and there's no jamming.

You all really extrapolate on that jamming word. :-)

By jamming, I mean the unauthorized use of a closed repeater, not
malicious interference.   Maybe I need to think of a better word
for it, but when a bunch of us attack a closed repeater with rapid-fire

conversation, we call it jamming. We operate legally within Part 97
and the Communications Act of 1934.

Roger Bly
--

Roger Bly
roger@brooktree.com

Date: 31 May 1994 10:15:31 -0700
From: ihnp4.ucsd.edu!swrinde!elroy.jpl.nasa.gov!not-for-mail@network.ucsd.edu
To: info-hams@ucsd.edu

References <ddtodd.124.000ABCF1@ucdavis.edu>, <CqLAIs.HwF@news.hawaii.edu>,
<2sfofs$hg2@btree.brooktree.com>
Subject : Re: Ham Radio few problem

In article <2sfofs$hg2@btree.brooktree.com>,
Roger Bly <roger@btree.brooktree.com> wrote:
>
>You all really extrapolate on that jamming word. :-)
>
>By jamming, I mean the unauthorized use of a closed repeater, not
>malicious interference.   Maybe I need to think of a better word
>for it, but when a bunch of us attack a closed repeater with rapid-fire
>conversation, we call it jamming. We operate legally within Part 97
>and the Communications Act of 1934.

Unauthorized use of private property (in this case, closed repeaters)
may be construed as trespassing or even theft! I hope that you and your
cronies are prepared to pay the price for your "civil disobedience."
Just because you operate "legally" within Part 97 and the Communications
Act of 1934 doesn't mean that you haven't broken any other law. You may
be in violation of civil/criminal codes regarding trespass and the right
to posession of property. Think about it...

Regards,
     Neil (kn6vj)

Neil D. Pignatano
ndp@misr-fsw.jpl.nasa.gov

"Plastic People, oh, baby, you're such a drag!"
-Frank Zappa

DISCLAIMER: The opinions expressed herein are mine...JPL can get their own!

Date: 31 May 1994 17:02:04 GMT
From: ihnp4.ucsd.edu!agate!kabuki.EECS.Berkeley.EDU!kennish@network.ucsd.edu
To: info-hams@ucsd.edu

References <CqB9s0.uH@cbfsb.cb.att.com>, <2rvnn9$d3q@master.cs.rose-hulman.edu>,
<CqGuv6.F3J@cbfsb.cb.att.com>
Subject : Re: Amp-Hours for a Battery

In article <CqGuv6.F3J@cbfsb.cb.att.com>,
mark.a.mccuistion <mam@cbnewsg.cb.att.com> wrote:

(stuff about short testing batteries...)

>
>I have a bunch of AA, C, and D nicads, which I recharge often for the
>use of my kids to run their toys.
>
>I OFTEN need to know, is this C battery charged or not. So, ...
>Doing this for AA, C and D cells shows my what the SHORT CIRCUIT
>amp condition of these batteries are. And whether it will work
>Michaels super zoomer, spinning flashing Turtle toy.

Once again, you are really not getting any useful information about
the state of charge, and are asking to destroy something.

>Every radio shack in the world has a little battery checker. The
>circuit has to be incredibly simple. Like a 50mA meter and a resister.
>So, by posting this query,I had hoped to get a response like,
>
>   To check a 10 Amh battery at 12 volts you need a 7zillion ohm resister,
>   To check a D cell, get a 2 micromilli ohm resister.

The reason those battery testers work is because they are intended for
use in zinc-carbon cells (this includes ZC, ZincChloride ZC cells, and
Alkaline ZC MnO2 cells). You need to understand the chemistry of what
is going on inside before applying this technique to other types
of cells such as NiCd.

The chemistry of ZC cells is quite complex, much more so than for
a NiCd. Let us look at the NiCd cell first, as it is the simpler of
the two. In a charged NiCd, the anode is Cd and the cathode is

NiOOH. (simplified) When you discharge the cell, the Cd is oxidized to Cd(OH)2 and gives up two free electrons for each atom of Cd. The electrons flow in the circuit and come to the cathode where they reduce the NiOOH to Ni(OH)2. As the cell discharges, the anode and cathode materials change from a fully charged to a fully discharged state. At any point within the discharge cycle, there are two species on each plate, Cd and Cd(OH)2 on the anode and NiOOH and Ni(OH)2 on the cathode. In both cases, the discharge product is inactive. Thus, the cell reaction is governed strictly by the Cd and NiOOH that remains. As long as there is some amount of Cd and NiOOH left, the cell voltage remains constant (in theory). THIS IS WHY NiCd CELLS HAVE A FLAT DISCHARGE CURVE. This is also why they drop like a rock at the end. When the last bit of active material goes over, there's nothing left to keep the cell going. Cells are also constructed to have a relatively constant internal impedance during the discharge cycle -- note that the electrolyte (KOH) doesn't really take part in the reaction.

In ZC cells, the chemistry isn't quite as simple. The reaction of Zn going to Zn++ and MnO2 going to MnOOH isn't a one step reaction like that of the NiCd. At any point in the discharge curve, there may be two or three compounds that are still electrically active at both the anode and cathode, and the electrochemical potential between them varies. What this means is the discharge voltage slowly drops as the overall activity of the cell is used up. This is the discharge curve we all know. In addition, the internal impedance of the cells goes up as the cells are discharged.

These two facts allow the use of a resistor and a voltmeter to determine state of charge for a ZC cell.

Because the way NiCds work, this method is unreliable as changes in temperature and cell aging will cause the reading to vary a lot more than several tens of percent of charge. I suppose that for a given battery, you could do some experiments and plot discharge voltage vs. charge taken out of the cell, provided you do it at a fixed temperature and not too fast.

>
>I GET IT that I shouldn't short my Ampmeter across anything big, (but I
>knew that cause my Electrical Engineer friend 'accidentaly' tried to measure
>the amps coming out of a wall socket, and yes the meter actually jumped
>before it fried.)

Uh hum.

>
>So, I still don't know how to check a larger, 2-10 Ahmhour battery
>to determine its actual amp-hour. But I do have this little meter
>with a resister, that I ripped out of a recharging unit, that has

>a nice scale that says good/charge.

Do you want to verify its capacity (Ah) or state of charge? Verifying Ah is easy, especially if you have a digital scope, but simply, just charge the battery, put a constant current load on it, such that the discharge current is 1/20 the Ah rating (i.e. 500 mA for a 10Ah battery) and time how long it takes for it to die. It should run for 20 hours. Any shorter and the battery isn't up to 100% snuff. If you are impatient and try to double the discharge current, then you won't get the full capacity, as batteries are usually rated at the 20Hr rate.

Like I said, state of charge in a NiCd is VERY hard to determine. Short circuit current will vary more with temperature than with state of charge. NiCds DO have a slight tilt to their discharge curve, so like I said, you can characterize a battery to learn its discharge characterisitics.

I agree that you should load the battery down before testing -- any cell will give you a good voltage with no load. Put a 20 hr load on it. But, there is no easy way to convert voltage to state of charge.

>
>And that's why I want to know the amp status of a battery. So I'll
>know if it needs charging before I get out in the field.
>
>So, what resister for what rating?

If you want a quick and dirty answer without understanding what is going on, use a 20 Hr resistor.

-ken

Date: 31 May 1994 09:10:51 -0700
From: nntp.crl.com!crl2.crl.com!not-for-mail@decwrl.dec.com
To: info-hams@ucsd.edu

References <rogjdCqAB3L.9r5@netcom.com>, <2s5g88$e7n@btree.brooktree.com>,
<rohvm1.mah48d-310594075417@136.141.220.39>om
Subject : Re: Ham Radio few problem

And to think when I started this topic I was hoping to focus on the best in ham radio. Sighhhh....

Jeff
--
Jeff Jones AB6MB

jeffj@crl.com

Date: 31 May 1994 16:03:07 GMT
From: nothing.ucsd.edu!brian@network.ucsd.edu
To: info-hams@ucsd.edu

References <2rjouc$cgf@mary.iia.org>, <rogjdCq5nJ1.31A@netcom.com>,
<nduehrCqL0x6.FIr@netcom.com>
Subject : Re: Ham Radio few problem

nduehr@netcom.com (Nathan N. Duehr) writes:
>I agree with AB6WR, something does need to be done about this. I visited
>SoCal recently and could only get one ham to talk to me on a 2m/70cm
>repeater the entire time I was in L.A.

Most of the repeaters on all bands in SoCal are PL (subaudible tone)
squelched, yet most are still open. They are that way because there
are NO clear channels; every single pair is shared with another
repeater somewhere and the tone squelch helps cut down on people keying
repeaters they don't intend to use. Do not make the mistake of
thinking that just because the repeater requires a tone, it is closed.
Check the repeater guides available at any local ham radio store.

However, the majority of the systems to be found on the 440 band in
SoCal ARE closed, as by longstanding areawide agreement, that's the
band where closed repeaters are to be located. In this way, people who
are not invited on one or more closed repeaters can save themselves the
cost and hassle of investing in equipment for that band.

It seems to me that's a workable compromise. Closed systems are legal
and fully supported by the FCC; by balkanizing them to a band by
themselves they are removed to a place where they should not annoy
people. This was done long before 440 radios where available at ham
radio stores, and long before most of you discovered the world above
30 MHz. Certainly it was done long before the ARRL arrogated band
planning to itself in the late seventies.

The SoCal 2m, 220, and 1200 MHz bands contain a number (a majority, in
the first two cases) of open repeaters. Enough, in fact, that every
repeater pair has at least two systems on it, and often more.

There are a few open systems on 440 - there are three of them here in
San Diego alone, and they are not at all busy - which a visitor using
440 equipment could easily use. Again, they are tone squelch for
interference avoidance, not because they're closed. I wonder if part of
the problem is that SoCal uses a low-in/high-out scheme (which works

better in our area because of the extremely high density of commercial systems on the 450-470 band), and thus visitors to the area don't hear much of anything on the band because they're listening in the wrong half!

I do not see why people would go out and buy equipment for a place where they aren't welcome. This is, perhaps, mostly the fault of the ham radio stores; they don't tell people that the dual-band x/440 radios are really only useful if you are invited on one of the closed systems on 440. Luckily, manufacturers are now selling 2m/220 and 2m/220/1200 radios which should be much more popular.

- Brian

End of Info-Hams Digest V94 #598

****